

REMARKS

The foregoing amendment cancels Claim 1, amends Claims 2-4, 6, 11, 15, and 22, and adds new Claim 24. In the application are Claims 2-24 which Claims 6, 10, 18, 23, and 24 are independent. No new matter and no new issues are raised by the foregoing amendments. Thus, consideration of the amendments requires no further search. Comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

Amendments

The amendments to Claims 2-4, 11, 15 and 22 are not meant to address any art rejection. The amendments address informalities in the pending claims. More specifically, the amendments to Claims 2-4 correct dependency issues caused by the cancellation of Claim 1. Claim 6 is amended to add a transitional phrase. Claim 11 is amended to correct an improper antecedent basis issue. Claims 15 and 22 are amended to improve readability by replacing the term “the same function” with the term “equivalent expressions.”

Objection to the Drawings

The drawings stand objected to under 37 C.F.R. § 1.83(a). More specifically, Figure 5 stands objected to in view of the subject matter recited in Claim 5. Figure 2 stands objected to in view of the subject matter recited in Claims 15 and 22.

With regard to Figure 2, Applicants note the response filed February 6, 2004, addressed this objection. More specifically, the response filed February 6, 2004 amended the specification and added Figure 2A, to address the Examiner’s objection to Figure 2 in view of Claim 5. Specifically, Figure 2A was added to depict a non-rewritable memory implemented in a single memory. Applicants further note the final Office Action mailed May 6, 2004 accepted the new drawing received on February 6, 2004, and withdrew the objection to the drawings under 37 C.F.R. § 1.83(a) in view of the subject matter recited in original Claim 5.

With regard to Figure 5, Applicants respectfully traverse this rejection based on the following comments. Claims 15 and 22 are amended above to replace the phrase “the same function” with the phrase “equivalent expressions” to clarify Applicants claimed subject matter and improve readability. Figure 5 represents a ladder diagram that includes a step 56 for determining if the function value K1 equals the function value K2. Applicants respectfully

contend that one skilled in the art viewing the ladder diagram depicted in Figure 5 would readily determine that if the function value K1 equals the function value K2 then the first security data function and the second security data function have equivalent expressions. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the objection to Figure 5 under 37 C.F.R § 1.83(a).

Objection to the Specification

The specification stands objected to for failing to provide proper antecedent basis for the claimed subject matter under 37 C.F.R § 1.75(d)(1). Applicants respectfully traverse each of these objections based on the following comments.

In paragraph Four of the Office Action, it is asserted that the specification lacks description of the claimed “rewritable and non-rewritable memory implemented in a single memory”, as recited in Claim 5. In response, Applicants direct the Examiner’s attention to page 11, lines 16-25 of the specification. Accordingly, Applicants contend the specification provides proper support for the subject matter recited in Claim 5. Moreover, Applicants direct the Examiner’s attention to the response filed February 6, 2004, which addressed this issue. Hence, Applicants respectfully request the Examiner to reconsider and withdraw the objection to the specification with respect to Claim 5.

With regard to the objection to the specification for the subject matter recited in Claims 15 and 22, Applicants respectfully traverse this objection based on the following comments. Applicants direct the Examiner’s attention to page 13, lines 19-22 of the specification for support of the subject matter recited in Claims 15 and 22. Further, a specific example of the first and second function is described on page 14, line 8 of the specification. By way of an example, both the first function F2 and the second function F1 are equivalently expressed. Authentication process using such a specific example is shown in Figure 5. If a value K2 of the second function calculated by the ECU is equal to a value K1 of the first function, the rewriting device is authenticated. Likewise, wherein different first and second security data values are generated, the rewriting device is not authenticated. Accordingly, Applicants contend the original specification provides proper support for the subject matter recited in Claims 15 and 22. Hence, Applicants respectfully request the Examiner to reconsider and withdraw the objection to Claims 15 and 22 under 37 C.F.R § 1.75(d)(1).

Claim Objections

Claim 6 stands objected to for lacking a transitional phrase. Applicants thank the Examiner for identifying this typographical error and have amended Claim 6 to include an appropriate transitional phrase. Based on the above amendments, Applicants respectfully request the Examiner to reconsider and withdraw his objection to Claim 6.

Claim Rejections under 35 U.S.C. § 112

Claims 1, 2, and 6-23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicants regard as their invention.

Rejection of Claim 1 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claim 1, Applicants consider the rejection under 35 U.S.C. § 112 moot for Claim 1 is cancelled by the above amendment. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 1 under 35 U.S.C. § 112, second paragraph.

Rejection of Claim 2 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claim 2, the foregoing amendment amends Claim 2 to correct the antecedent basis issue identified by the Examiner. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 2 under 35 U.S.C. § 112, second paragraph.

Rejection of Claims 6 and 7 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claims 6 and 7 under 35 U.S.C. § 112, second paragraph, Applicants respectfully traverse this rejection based on the following comments. Claim 6 reads in part “wherein the new security data written in the rewritable memory is used to determine whether rewriting to the rewritable memory is permitted.” That is, once the new security data is written into the memory it is then usable to determine whether rewriting to the rewritable memory is permitted. Claim 7 further limits Claim 6 because Claim 7 recites the rewritable memory stores first security data that is used to determine whether rewriting to the rewritable memory is permitted and the rewriting device requests the vehicle controller to delete the first

security data and write the transferred new security data into the rewritable memory. That is, the first security data is used to determine whether rewriting to the rewritable memory is permitted (i.e. the new security data). The recited new security data and first security data are separate and distinct security data. The first security data is used to determine whether rewriting to the rewritable memory is permitted.

With further regard to Claim 6, Claim 6 recites a rewriting device for rewriting a rewritable memory included in a vehicle controller. The rewriting device includes a memory storing new security data and a communication means for transferring the new security data from the memory to write the new security data into the rewritable memory. The new security data written in the rewritable memory is used to determine whether rewriting to the rewritable memory is permitted. That is, once the new security data is rewritten into the rewritable memory the new security data is used to determine whether rewriting to the rewritable memory is permitted. In view of the forgoing amendments, Claim 6 is clear and definite and further recites a memory and a communication means having a clear cooperative structural relationship.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claims 6 and 7 under 35 U.S.C. § 112, second paragraph.

Rejection of Claims 10 and 14 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claims 10 and 14 under 35 U.S.C. § 112, second paragraph, Applicants respectfully traverse each of these rejections based on the following arguments. Claim 10 recites a memory rewriting system for a vehicle controller that includes a rewritable memory, and a rewriting device. The rewritable memory stores first security data, the first security data being used to determine whether rewriting to the rewritable memory is permitted. The rewriting device transfers new security data to the vehicle controller. The vehicle controller is configured to delete the first security data and to write the new security data into the rewritable memory. That is, the vehicle controller is configured to use the first security to determine whether rewriting to the rewritable memory is permitted. Claim 14 depends on Claim 10 and further limits independent Claim 10. Claim 14 recites the rewriting device stores second security data and the vehicle controller is configured to compare the first security data with the second security data transferred from the rewriting device and permit rewriting to the rewritable memory if the first security data matches the second security data.

In either embodiment, the first security data is used to determine whether rewriting to the rewritable memory is permitted. Claim 14 limits the determination of whether rewriting is possible by comparing the first security data and the second security data transferred from the rewriting device. Moreover, as Claim 10 recites, if the vehicle controller determines that rewriting to the rewritable memory is permitted the first security data is deleted and new security data is written into the rewritable memory. Hence, in at least one embodiment of the present invention the second security data is used to determine in conjunction with the first security data whether rewriting to the rewritable memory is permitted. Furthermore, Claims 10 and 14 are clear and distinct in that those skilled in the art would readily recognize that the recited new security data and the recited second security data are not the same. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claims 10 and 14 under 35 U.S.C. § 112, second paragraph.

Rejection of Claim 11 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claim 11, the foregoing amendment amends Claim 11 to correct the antecedent basis issue identified by the Examiner. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 11 under 35 U.S.C. § 112, second paragraph.

Rejection of Claims 18 and 21 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claims 18 and 21 under 35 U.S.C. § 112, second paragraph, Applicants respectfully traverse each of these rejections based on the following comments. Claim 18 recites a method for rewriting data stored in a rewritable memory. According to the steps recited in Claim 18, the first security data is used to determine whether rewriting to the rewritable memory is permitted. Claim 21 depends from Claim 18 and further limits Claim 18 by reciting a step of comparing the first security data with the second security data to determine if rewriting to the rewritable memory is permissible. Hence, in one embodiment the first security data is used to determine if the new security data is to be written into the rewritable memory and in another embodiment of the present invention the first security data and the second security data are both used to determine if the new security data is to be written into the rewritable memory. As such, new security data and the second security data are

distinct. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claims 18 and 21 under 35 U.S.C. § 112, second paragraph.

Rejection of Claims 15 and 22 under 35 U.S.C. § 112, second paragraph:

Claims 15 and 22 are amended to recite the first security data and the second security data have equivalent expressions. The use of equivalent expressions yields like results. However, an evaluation of each equivalent expression using unauthorized identifiers, values or operators yields unlike values and hence the rewriting device is not authenticated to rewrite to the rewritable memory of the controller. Accordingly, Applicants contend that one skilled in the art would readily recognize and understand the limitations recited in Claims 15 and 22.

With regard to the rejection of Claim 15 for lacking a proper antecedent basis for the term “second security data,” Applicants amend Claim 15 to correct the antecedent basis issue identified by the Examiner.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claims 15 and 22 under 35 U.S.C. § 112, second paragraph.

Rejection of Claim 23 under 35 U.S.C. § 112, second paragraph:

With regard to the rejection of Claim 23 under 35 U.S.C. § 112, second paragraph, Applicants respectfully traverse this rejection based on the following comments. Claim 23 stands rejected because the limitation “one or more signals” lacks cooperative structural relationship among the elements in the claim. Applicants respectfully disagree. Claim 23 recites a vehicle controller that includes a rewritable memory, a controller, and an interface. The controller is configured to initiate an authentication process to authenticate an external rewriting device. The interface is configured to receive and transmit one or more signals between the controller and the external rewriting device. One skilled in the art will readily recognize the structural relationship of the controller and the external rewriting device communicating with one another via the interface configured to receive and transmit one or more signals between those devices. Furthermore, one skilled in the art will readily recognize that the term signal or signals represents an electrical quantity such as voltage, current, or frequency that can be used to transmit information. As such, one skilled in the art will readily recognize that the one or more signals are used to transmit data and instructions between the controller and the external rewriting device, and that data can include the new security function if other conditions are met.

Applicants contend that one skilled in the art would readily recognize and be able to obtain the scope of Applicants invention recited in Claim 23. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 23 under 35 U.S.C. § 112, second paragraph.

Claim Rejections under 35 U.S.C. § 103

Rejection of Claims 1-15 and 17-23 under 35 U.S.C. § 103(a):

This Office Action rejects Claims 1-15 and 17-23 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,285,948 of Takagi, et al. (hereinafter “Takagi”). Applicants respectfully traverse this rejection based on perfecting a right of priority under 35 U.S.C. § 119.

The recited Takagi reference fails to qualify as prior art under 35 U.S.C. § 102 and, hence, fails to qualify as prior art under 35 U.S.C. § 103(a). Filed herewith is an English translation of Applicants certified priority document and a verification of translation from the translator to perfect Applicants right of priority, in accordance with 37 CFR § 1.55(a)(4). Applicants perfected foreign priority filing date of March 16, 2000 antedates the April 6, 2000 filing date of the Takagi reference. Accordingly, Takagi fails to establish a *prima facie* case of obviousness for use in the rejection of Claims 1-15 and 17-23.

Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claims 1-15 and 17-23 under 35 U.S.C. § 103(a).

Rejection of Claim 16 under 35 U.S.C. § 103(a):

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi in view of U.S. Patent No. 6,401,207 of Funakoshi, et al. (hereinafter “Funakoshi”). Applicants respectfully traverse this rejection based on perfecting a right of priority under 35 U.S.C. § 119.

The cited Takagi reference fails to qualify as prior art under 35 U.S.C. § 102 and hence, fails to qualify as prior art under 35 U.S.C. § 103(a). Filed herewith is an English translation of Applicants certified priority document and a verification of translation from the translator to perfect Applicants right of priority, in accordance with 37 CFR § 1.55(a)(4). Applicants perfected foreign priority filing date of March 16, 2000 antedates the April 6, 2000 filing date of the Takagi reference. Accordingly, Takagi in view of Funakoshi fails to establish a *prima facie* case of obviousness for use in the rejection of Claim 16.

Applicants respectfully request the Examiner to reconsider and withdraw the rejection of Claim 16 under 35 U.S.C. § 103(a).

New Claim 24

None of the cited references, alone or in any combination, anticipate, teach or suggest each and every element of new Claim 24. According to the memory rewriting system for a vehicle controller recited in Claim 24 rewriting is performed after the rewriting device is authenticated. The vehicle controller of Claim 24 is configured to determine whether there is a predetermined relationship between first security data received from a rewriting device and second security data stored in a rewritable memory. The vehicle controller releases a security feature that prevents the rewritable memory from being rewritten if it is determined that there is a predetermined relationship therebetween. The controller deletes the second security data after release of the security feature and writes third security data received from the rewriting device into the rewritable memory. The third security data being different from the first security data. None of the cited references, alone or in any combination, detract from the patentability of new Claim 24.

CONCLUSION

Applicant believes no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. OAC-009RCE from which the undersigned is authorized to draw.

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Respectfully submitted,

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